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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,601	08/25/2003	Hong-Shan Wei		4276

25859 7590 04/28/2008

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EXAMINER	
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ART UNIT	PAPER NUMBER
4176	

MAIL DATE	DELIVERY MODE
04/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/648,601	WEI, HONG-SHAN	
	Examiner	Art Unit	
	Fathi Abdelsalam	4176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *April 9, 2008 (Election)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) *1-3* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20030825*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Invention II (Claims 4-11) in the reply filed on April 9, 2008 is hereby acknowledged.

2. Claims 1-3 are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 9, 2008.

Priority

3. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Taiwan on 12/13/2002.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated

by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 4-11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of US Patent No. 6,889,106. Although the conflicting claims are not identical, they are not patentably distinct from each other because they describe the same components of invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in:
>
> > (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or
> >
> > (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Zweben et al. (US 6,216,109), hereinafter referred to as Zweben.

Regarding **Claim 11**, Zweben discloses a production capability simulating method comprising:

retrieving relevant data ([Zweben], "A system according to one embodiment of the invention includes a memory device and a processing device. The memory device is used to store various information such as: i) an unacceptable initial schedule that is supplied to the system; ii) information regarding each of a multiplicity of constraints, the constraint information including a description of the constraint");

maintaining MPS (Master Production Schedule) parameters ([Zweben Claim 1], "A method for scheduling a complex activity that is governed by a set of pre-defined constraints including consumable resource constraints") and ([Zweben col. 3, lines 23-32], "As input, the MRP system accepts the production requirements of the build schedule, subassembly and raw materials inventory levels (to net production requirements against existing inventory), bills of materials (BOMs) associated with the production of the finished goods and subassemblies, and information regarding production and material ordering lead times.");

generating an original MPS ([Zweben col. 5, lines 28-40], "A predetermined initial schedule…" and "establishing an unacceptable initial schedule as a current schedule");

simulating RCCP (Rough-Cut Capacity Planning) and MRP (Material Requires Planning) ([Zweben col. 3, lines 19-25], "Once MPS and rough cut capacity planning have been used to develop a satisfactory build schedule for the supply of finished goods, the production requirements of the build schedule are supplied to a material requirements planning (MRP) system.";

amending the original MPS based upon a simulation result, if required ([Zweben claim 1 & col. 5, lines 44-47], "repairing one or more constraint violations of the current schedule by modifying the current schedule without relaxing the set of pre-defined constraints and determining a revised schedule from the schedule modification or modifications made by the constraint violation repair or repairs" and "repeating the steps

of repairing one or more of the constraint violations of the current schedule, determining a revised schedule"; and

Generating an optimized MPS ([Zweben Abstract], "All constraints on the scheduling activity can be evaluated simultaneously to produce a solution that is near optimal with respect to all constraints"..

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zweben et al. (US 6,216,109), in view of Borg et al. (US 5,835,898), hereinafter, respectively referred to as Zweben and Borg.

Regarding **Claim 4**:

Zweben discloses a production capability simulating method, comprising the steps of:

selecting an original MPS (master production schedule) to be simulated ([Zweben col. 5, lines 28-40], "A predetermined initial schedule..." and "establishing an unacceptable initial schedule as a current schedule");

selecting a simulation mode can be a purely mental step taken while performing a simulation and is commonplace to those of ordinary skill in the art at the time of the invention;

simulating the original MPS and generating simulation results (Zweben Claim 1 in its' entirety embodies a quintessential simulating method producing results);

determining whether there are one or more contingencies that require rescheduling of the original MPS and amending the original MPS if there are said contingencies, and returning to the simulating process regarding the amended MPS ([Zweben col. 1, lines 33-36], "Development of a schedule that resolves the many possible conflicts that may arise during conduct of the activity") and ([claim 1 & col. 5, lines 44-47 (respectively)]: "repairing one or more constraint violations of the current schedule by modifying the current schedule without relaxing the set of pre-defined constraints and determining a revised schedule from the schedule modification or modifications made by the constraint violation repair or repairs" and "repeating the steps of repairing one or more of the constraint violations of the current schedule, determining a revised schedule"; and

generating an optimized MPS if there are no said contingencies or when said contingencies have been eliminated by applicable previous steps hereof, and generating weekly production schedules based on the optimized MPS ([Zweben Abstract], "All constraints on the scheduling activity can be evaluated simultaneously to produce a solution that is near optimal with respect to all constraints" and "selecting one

of the revised schedule or the current schedule as the new current schedule; vii) repeating the steps of repairing one or more of the constraint violations of the current schedule, determining a revised schedule, calculating a score for the revised schedule, and selecting one of the revised schedule or the current schedule as the new current schedule; and viii) selecting one of the revised schedules as the final schedule" (col. 5, lines 43-50).

Zweben does not explicitly disclose the system generating a simulation report based on the simulation results. Borg, however, teaches that "the current practice of the larger companies in the manufacturing industry is to use one or more computer - generated reports, either on paper or displayed on a monitor, to identify areas in the manufacturing facility where the work load exceeds the available capacity" (col. 1, lines 43-46).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the method of Zweben so as to have included the generation of simulated production reports, as taught by Borg, in order to "allow for faster updating and easier mathematical manipulation of production data" (col. 1, lines 35-38), since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected results.

Regarding **Claims 5 and 6**:

Zweben discloses in the background of the invention well known knowledge of a production capability simulating method, wherein the selected simulation mode is an

RCCP or MRP simulation mode ([Zweben col. 3, lines 19-25], "Once MPS and rough cut capacity planning have been used to develop a satisfactory build schedule for the supply of finished goods, the production requirements of the build schedule are supplied to a material requirements planning (MRP) system." Further more, Zweben discloses "in the manufacturing context for example, the system and method according to the invention simultaneously accomplish all of the scheduling functions associated with the scheduling techniques discussed above: master production scheduling, rough cut capacity planning, material requirements planning (or manufacturing resource planning), capacity resource planning and finite capacity scheduling" (col. 6, lines 34-41).

Regarding **Claims 7, 8, 9, and 10**:

Zweben discloses a production capability simulating method. Zweben also discloses well known prior art knowledge wherein "A build schedule, as developed by a MPS system for example, is input into the rough cut capacity planning system and a determination is made as to whether sufficient resources exist to implement the build schedule" (col. 2, lines 61-65).

Zweben does not explicitly disclose the system generating a simulation report wherein the simulation report includes information on one or more workstations that have insufficient production capability and on one or more production materials that are in shortage.

Borg, however, teaches that "the current practice of the larger companies in the manufacturing industry is to use one or more computer -generated reports, either on

paper or displayed on a monitor, to identify areas in the manufacturing facility where the work load exceeds the available capacity" (col. 1, lines 43-46).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the method of Zweben so as to have included the generation of simulated production reports detailing information on contingencies comprising insufficient production capability of one or more workstations and one or more insufficient production materials, as taught by Borg, in order to "allow for faster updating and easier mathematical manipulation of production data" (col. 1, lines 35-38), since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected result.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fathi Abdelsalam whose telephone number is (571) 270-3517. The examiner can normally be reached on Monday to Thursday 8:00-5:00 ET.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry O'Connor can be reached on (571) 272-6787. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. A./
Examiner, Art Unit 4176

/Gerald J. O'Connor/
Supervisory Patent Examiner
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